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Plant Disease in Kansas

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HIGHLIGHTS

Recent rains over the last ten days across Kansas have dramatically improved the state's wheat crop. Leaf rust was reported in south central Kansas in mid April and likely has increased with the precipitation.

Wheat streak mosaic is the most serious disease of the crop so far. WSM has been reported some in southeast and northeast Kansas but primarily in the numerous reports from central and western regions.

Day lily rust, hosta viruses, and rose mosaic have been observed in retail centers.

Rose rosette, a disease of wild and cultivated roses, is active in southeast Kansas on the noxious weed, multiflora rose.

Fig. 1 Rose rosette with red rosettes of stem and leaves.



Asian soybean rust is more widespread this spring than a year ago. Reports are of rust in many locations in Florida and then limited reports in Alabama, Texas/Mexico, and Georgia. For more information on the disease,

please refer to the website at the following address:
<http://www.sbrusa.net/>.

OUTLOOK

Look for downy mildew of rose, day lily rust, and hosta virus x in retail centers. The weather or potential for these diseases is moderate to high. The wet weather has also been ideal for infection of cedar apple rust on apples and pine tip blight of Scots and black pines. Look for these two diseases in a few weeks.

In wheat, moisture will bring foliar disease into the forefront. Tan spot and leaf rust could affect some fields. Is your wheat yellow with streaking? Then you probably have been infected by wheat streak mosaic. It can be found across the state at this time and in some areas near epidemic.

RETAIL CENTERS

Hosta viruses continue to be the biggest concern of infected stock that is being sold to consumers. Hosta virus x is being found in a considerable amount of material inspected in the state. Symptoms include puckering of leaves, stunting, mosaic and spotting of leaves. It is difficult to confirm infection without testing because of the various leaf variegation patterns present. The disease is easily transmittable between hosta by mechanical injury with sap from propagation, mowing, or trimming activities.

Day lily rust had been reported at a few locations in the state from a source from southern Texas. Infection has been heavy in affected cultivars. This disease is difficult to control with fungicides, moves rapidly through wind blown spores, and may affect whole beds or plantings.



Fig. 2. Day lily rust on the cultivar Little Bumblebee, B. Hilbert KDA.

WHEAT

Wheat streak mosaic is the most important disease to this year's wheat crop. In the fall, survey was conducted and found the crop infected in western counties and in south central Kansas (Plant Disease in Kansas, KDA, Report 8 on November 28, 2005). Cold weather prevented any further survey in 2004 after mid November. Historically, fall wheat survey has given a pretty good forecast on impending spring problems with this disease.

With the number of reports coming into KSU agronomists and plant pathologists and survey observations although limited, this disease could be the number one disease in yield loss estimates. Extensive survey will be conducted over the next month to ascertain the complete picture of this and other diseases in the crop.



Fig. 3. Infected WSM yellow wheat in 2005. Healthy green wheat in the background.

So far this year, the disease has been outside its normal range of western Kansas with reports in southeast and northeast Kansas. Survey has observed disease in Kingman, Harper, Reno, and Sedgwick counties in south central and KSU extension and diagnostic reports are from central and western regions.

Fig. 4. The wheat curl mite in a scanning electron microscope image. Source unknown.



The disease is favored by dry windy weather in the fall which allows the wheat curl mite to transmit the disease at high amounts. The mite is blown from volunteer wheat to planted wheat and then vectors the virus by feeding on young leaves. In September of 2005, numerous reports of wheat streak mosaic and mites in volunteer wheat were made.